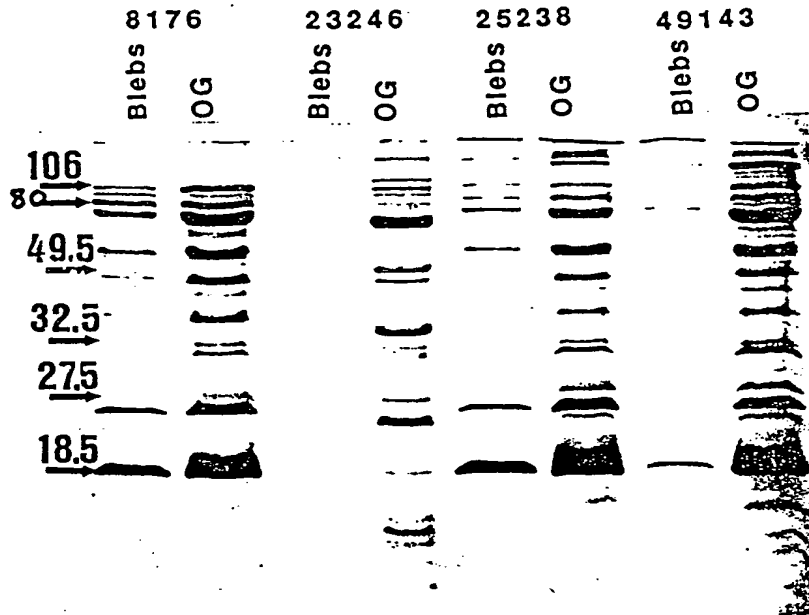


Figure 1



BEST AVAILABLE COPY

Figure 2

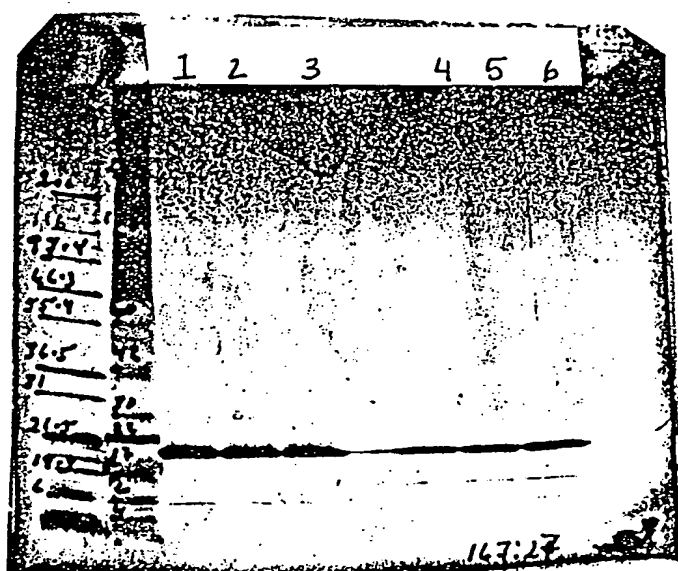


Figure 3

Nucleic acid sequence of OMP21 of *Moraxella catarrhalis*

```

5'      11      21      31      41      51      61      71      81      91
ATGAAACTT TAAAAACACT ATTGGCAGTA TCAGCTTCTT CGTATTGGC GATGAGTCTT AACGCTGCCA TCAGCTATGG CAATTCTGCT GATGCCCAAC
1 TACTTTTGAA ATTTTGTGA TAACCGTCAT AGTCGAAGAA GCAATAACCG CTACTCAGCA TTGCGACGGT AGTCGATACC GTTAAGACGA CTACGGGTG
5'      11      21      31      41      51      61      71      81      91
CCTATGTTGG TGCCAAAATT GGTCAAGTAG ACGCCAAGCA AATCAACGGT AAGAACAACG CTTATGGTAT TTATGCAGGT TATAACTTTG ACCAAAATTT
101 GGATACAACC ACGGTTTAA CCAGTTTCATC TCGGTTTCTT TTAGTTGCCA TTCTTTGGGC GAATACCATA AATACGTCCA ATATTGAAAC TGGTTTTAAA
5'      11      21      31      41      51      61      71      81      91
TGGCGTAGAA GCGGAATTGG TTGGTTTACA CGCCAAGAA TTTAATGCCAG GCGTCACTCC TGTAAAAGGT GATGTGAAGT CTTTTGGTGC TTATGGCACA
201 ACCGATCTT CCGCTTAAAC AACCAAGTCT GCGGTTTCTT AAATTACGTC CGCACTCAGG ACATTTTCCA CTACACITCA GAAAACCAAG AATACCGTGT
5'      11      21      31      41      51      61      71      81      91
TATCGCTATA ACTTCATCAA TACCCCATTT TATGCCAAGG GCAAAATTAG CATTCGTTAG ATGTTACCAG CCGTAATGCA ACTACATACT
301 ATAGCGATAT TGAAGTAGTT ATGGGGTAAA ATACGGTTCC CGTTTAATCC GTAACGATTC TGAITTCATC TACAATGGTC GGCAITTAGT TGATGTATGA
5'      11      21      31      41      51      61      71      81      91
CAAAACAAAG CGACAAAACC AGCCTAGCAG GCGGTGTTGG TGTTGGCTTT AAACCAATTAG CAAATGTGGG CGTTGAAGCA AGCTACAACAT ATCTATCAGA
401 GTTGTGTTTC GCTGTTTGG TCGGATCGTC GCGCACAAACC ACAACCGAAA TTITGGTAATC GTTTACACCC GCAACTCGT TCGATGTTGA TAGATAGTCT
5'      11      21      31      41      51      61      71      81      91
AGAAGCCAAT GCAATTAGTT TGGGCGCTCA TTGGCTTTT TAA
501 TCTACGGTTA CGTTAATCAA ACCCGCGAGT AAACCGAAAA ATT

```

Figure 4

Deduced amino acid sequence of OMP21
(the amino acid sequence from N-terminal sequencing is underlined)

N	11	21	31	41	51	61	71	81	91	
1	MKTLKTLAV	SASSLLAMSA	NAAISYGN	SA DAQPVGAKI	<u>QVDAKQING</u>	<u>KNTAYGIYAG</u>	<u>YNFDQNFVE</u>	AEFVGSDAKE	FNAGVSPVKG	DVKSFGAYGT
N	11	21	31	41	51	61	71	81	91	
101	YRYNFINTPF	YAKGKLGIAK	TKVDVTSR	NA ITTYSNKS	SDKT SLAGGVGV	GF KPLANVGVEA	SYNVLSEDAN	AISLGAHLAF	#	

Figure 6

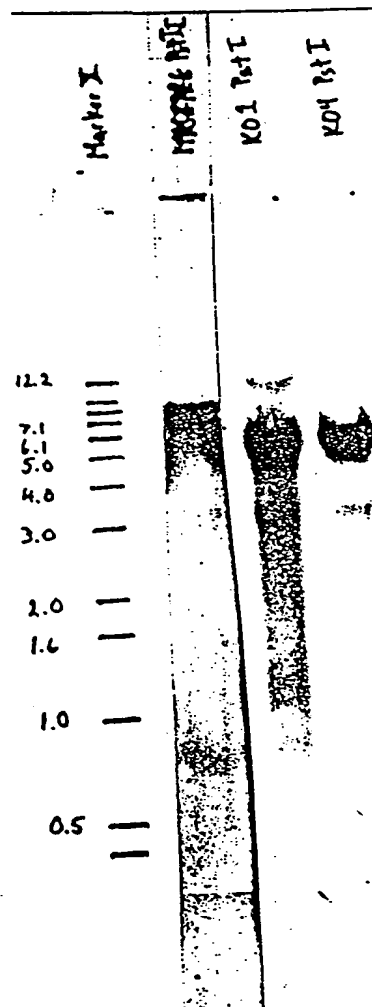


Figure 7

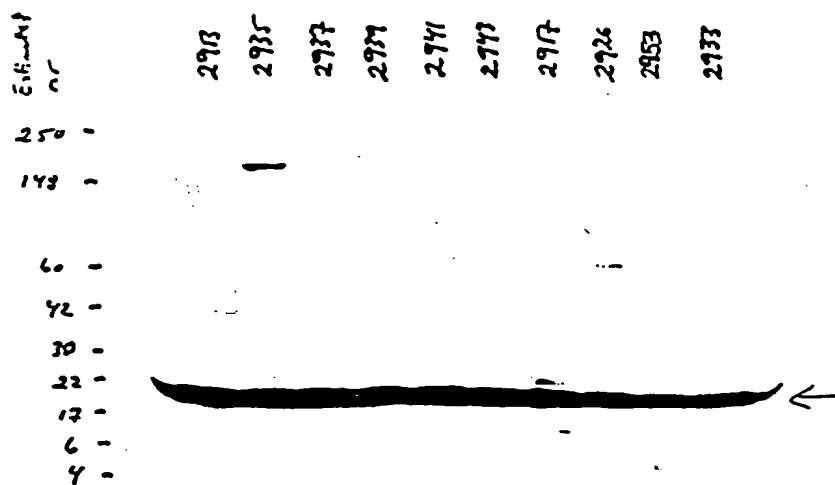
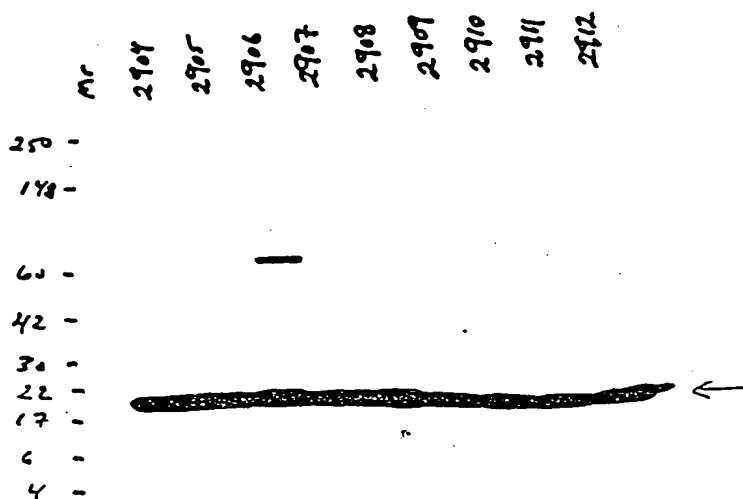


Figure 8

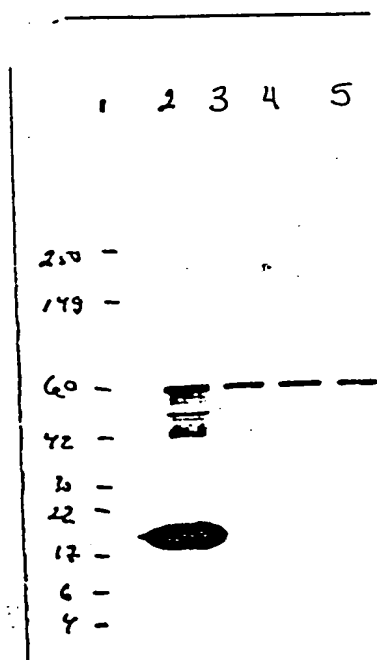
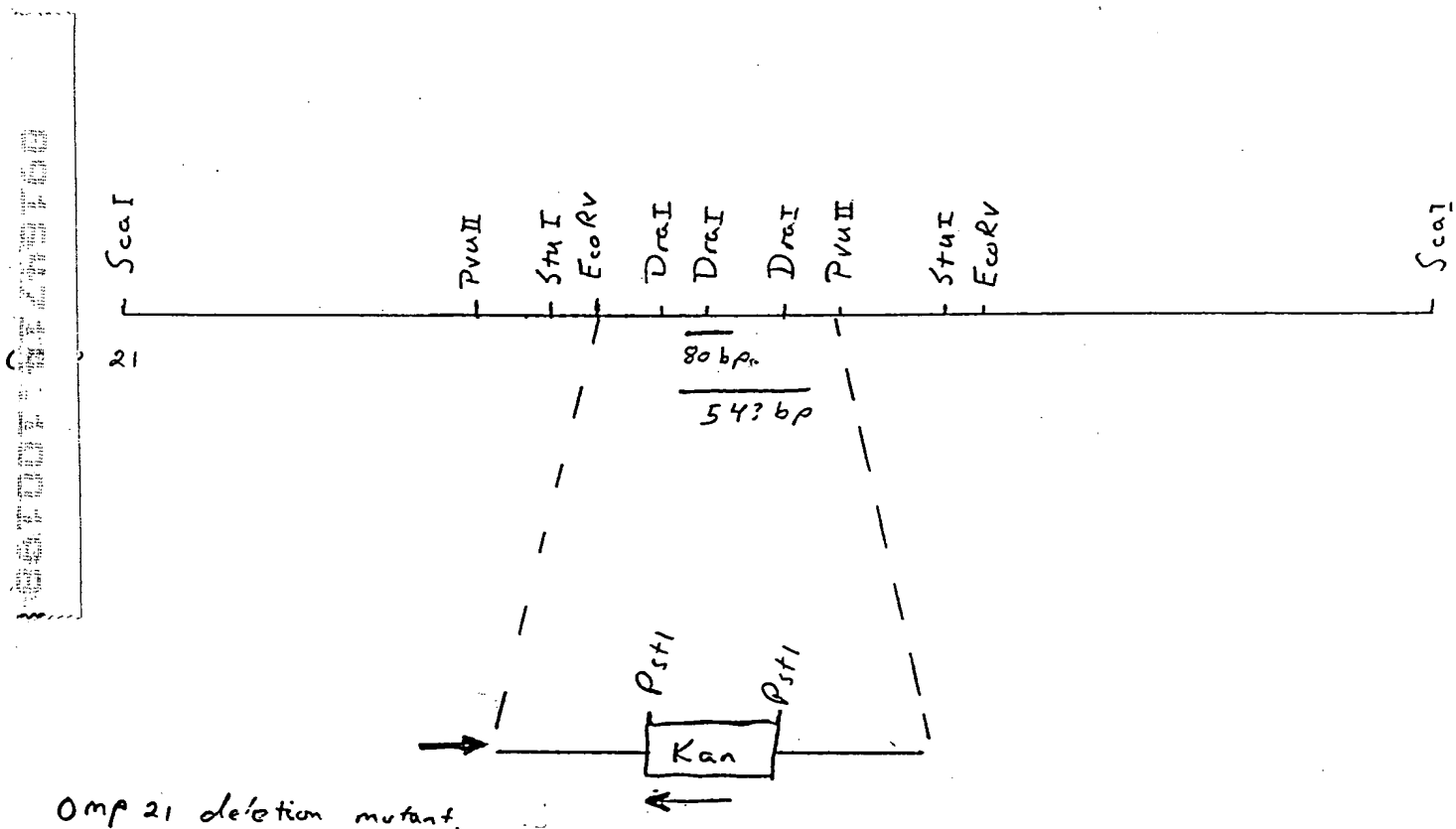


Figure 9



**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☒ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.